

Notice of Allowability

Application No.

09/436,368

Applicant(s)

CRATER ET AL.

Examiner

Viet Vu

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to a phone interview conducted on 7/17/06.
2. ☒ The allowed claim(s) is/are 1-17,56-69 and 126.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Art Unit: 2154

Examiner's Amendment:

1. An Examiner's Amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 C.F.R. § 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the Issue Fee.

Authorization for this examiner's amendment was given by Mr. Himelhoch via a telephone interview on July 17, 2006.

2. The application has been amended as follows:

The claim amendment is shown in the listing of claims.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Viet Vu whose telephone number is 571-272-3977. The examiner can normally be reached on Monday through Friday from 7:00am to 4:00pm. The Group general information number is 571-272-2100. The Group fax number is 571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee, can be reached on 571-272-3964.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Art Unit 2154
7/18/06

VIET D. VU
PRIMARY EXAMINER

LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in this application.

1. (Previously Presented) A controller capable of interacting with a remotely located computer, the controller comprising:
 - a. a data-gathering unit configured to gather data relevant to an industrial control function; and
 - b. a web server configured to receive a request from the remotely located computer and, in response to the request, configured to transmit to the remotely located computer instructions associated with the data, execution of the instructions by the remotely located computer causing said computer to present the data in a predetermined format wherein the data is displayed in a dynamic fashion on the remotely located computer and to periodically request updated data from the web server.
2. (Original) The controller of claim 1 wherein the web server is configured to receive requests and transmit instructions over the Internet.
3. (Original) The controller of claim 1 wherein the web server implements TCP/IP.
4. (Original) The controller of claim 1 wherein requests are received and instructions transmitted in accordance with the HyperText Transfer Protocol.
5. (Original) The controller of claim 1 wherein the instructions define a web page for presentation on a browser running as an active process on the remotely located computer.
6. (Original) The controller of claim 5 wherein the controller comprises at least one input/output module, the web page comprising data gathered from the at least one module and formatting instructions.
7. (Previously Presented) The controller of claim 6 wherein the web page further comprises applet instructions execution of which causes the remotely located computer to periodically request updated data from the controller.
8. (Previously Presented) A method of obtaining and presenting data associated with a control system, the method comprising the steps of:
 - a. gathering data relevant to an industrial control function;

Art Unit: 2154

- b. storing (i) the data and (ii) instructions defining a web page; and
- c. receiving a request from the remotely located computer and, in response to the periodic request, transmitting the instructions to the remotely located computer, execution of the instructions by the remotely located computer causing said computer to present the data in a dynamic fashion in accordance with the web page and to periodically request updated data.

9. (Original) The method of claim 8 wherein requests are received and instructions transmitted over the Internet.

10. (Previously Presented) The method of claim 8 wherein requests are received and instructions transmitted using TCP/IP.

11. (Original) The method of claim 8 wherein requests are received and instructions transmitted in accordance with the HyperText Transfer Protocol.

12. (Previously Presented) The method of claim 8 wherein the web page is presented by a browser running as an active process on the remotely located computer.

13. (Original) The method of claim 12 wherein the web page comprises (i) gathered data and (ii) formatting instructions.

14. (Previously Presented) The method of claim 13 wherein the web page further comprises applet instructions execution of which causes the remotely located computer to display the data in the dynamic fashion.

15. (Original) The method of claim 14 wherein the data is continuously generated, the instructions causing the remotely located computer to continuously request the changing data from the controller and to display the retrieved data.

16. (Previously Presented) The method of claim 8 wherein the control function comprises operation of an industrial machine, the data-gathering step comprising receiving data from the machine.

17. (Previously Presented) The method of claim 8 wherein the control function comprises operation of an industrial process, the data-gathering step comprising receiving data from equipment implementing the industrial process.

18-55. (Cancelled)

56. (Currently Amended) A method for distributing control and monitoring operations, comprising the steps of:

locating a remote controller on a network with a browser on a computer, the remote controller configured to gather status data relevant to an industrial control function;

downloading a page defined by a markup language from the controller that includes the status data from the controller and an embedded program for viewing the status data on the computer; and

the embedded program ~~autonomously periodically~~ executing on the computer and causing the status data from the controller to be displayed on the computer in a dynamic fashion and periodically requesting updated status data from the controller.

57. (Previously Presented) The method of Claim 56, wherein:

the embedded program is a Java applet.

58. (Previously Presented) The method of Claim 56, wherein:

the embedded program is an ActiveX control.

59. (Previously Presented) The method of Claim 56, wherein:

the markup language is HTML.

60. (Previously Presented) The method of Claim 56, wherein:

the step of downloading is performed a single time.

61. (Previously Presented) The method of Claim 56, further comprising the steps of:

connecting the controller to a network; and

connecting a remote computer to the network.

62. (Previously Presented) The method of Claim 61, wherein:

the network is an Internet protocol network.

63. (Previously Presented) The method of Claim 62, wherein:

at least a portion of the network is the Internet.

64. (Previously Presented) The method of Claim 56, wherein:

the embedded program includes instructions for retrieving updated data from the remote controller and for causing the updated data to be displayed on the computer in the same page that was downloaded in the downloading step.

65. (Previously Presented) The method of Claim 56, wherein:

the page includes hyperlinks to other controllers on the network.

66. (Previously Presented) The method of Claim 65, further comprising the steps of:

selecting a hyperlink included on the page that corresponds to a second remote controller;
downloading a second page defined by a markup language from the second remote controller that includes status data from the second remote controller and a second embedded program for viewing the status data from the second remote controller; and

executing the second embedded program on the computer causing the status data from the second remote controller to be displayed on the computer.

67. (Currently Amended) A method for allowing remote monitoring of a programmable logic controller by sending a single message from the programmable logic controller to a monitoring computer, comprising the steps of:

storing data relevant to an industrial control function to be monitored in a memory location of the programmable logic controller that is accessible over a network;

sending a single message to the monitoring computer including a page defined by a markup language that includes an executable program ~~that when~~ to be executed on the monitoring computer will cause the monitoring computer to ~~periodically~~ retrieve the data to be monitored from the memory location and will cause the data to be monitored to be displayed dynamically in a predetermined format on the monitoring computer and will cause the computer to periodically request updated data from the programmable logic controller.

68. (Currently Amended) A system for allowing remote monitoring of a programmable logic controller by sending a single message from the programmable logic controller to a monitoring computer, comprising:

means for storing data relevant to an industrial control function to be monitored in a memory location of the programmable logic controller that is accessible over a network;

means for sending a single message to the monitoring computer including a page defined by a markup language;

means for including in the single message an executable program ~~that when~~ to be executed on the monitoring computer causes the monitoring computer to ~~periodically~~ retrieve the data to be monitored from the memory location, ~~and~~ causes the data to be monitored to be

Art Unit: 2154

displayed dynamically in a predetermined format on the monitoring computer, and causes the computer to periodically request updated data from the memory location.

69. (Currently Amended) A system for distributing control and monitoring operations, comprising:

means for controlling industrial equipment;

means for locating a remote controller on a network;

means for downloading from the means for controlling a page defined by a markup language that includes status data relevant to an industrial control function from the controller and an embedded program for viewing the status data; and

means for executing the embedded program on the computer and means for causing the status data from the controller to be dynamically displayed on the remote computer, the embedded program configured to cause the computer to ~~and for periodically downloading~~ download updated status data for display on the remote computer.

70-125. (Cancelled)

126. (Currently Amended) A computer implemented factory automation control system, comprising:

a remote computer having a processor, and

a memory having stored therein an executable program having processor readable instructions that when executed by said remote computer implements a factory automation control mechanism configured to cause said remote computer to periodically access a memory of a controller controlling equipment of a factory automation system via a browser for data relevant to an industrial control function, to display in the browser information relating to the data stored in the memory of the controller, ~~and~~ to change the data stored in the memory of the controller by manipulating the information displayed in the browser, and to cause the remote computer to periodically request updated data from the controller.

127 - 128. (Cancelled).